WHAT IS CLAIMED IS:

1. A method of removing AM neighboring interference of an AM receiver, comprising the steps of:

    multiplying an AM modulation wave desired to be received by a signal having a frequency higher by a predetermined frequency than a carrier frequency of an interference AM modulation wave causing neighboring interference and by another frequency lower by the predetermined frequency than the carrier frequency of the interference AM modulation wave;

    removing high frequency components from each of two multiplied signals to derive two signals, and subtracting one of the two derived signals from the other to obtain a subtraction signal; and

    removing high frequency components higher than a predetermined frequency from the subtraction signal to obtain the AM modulation wave desired to be received.

2. An AM neighboring interference removing circuit for removing AM neighboring interference of an AM receiver, comprising:

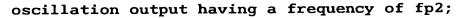   a first local oscillator for generating an oscillation output having a frequency of fp1;

    a second local oscillator for generating an

oscillation output having a frequency of fp2;

a first multiplier for multiplying an AM stereo modulation wave desired to be received, by the oscillation output from said first local oscillator;

a second multiplier for multiplying the AM stereo modulation wave desired to be received, by the oscillation output from said second local oscillator;

a first low-pass filter for removing high frequency components contained in an output of said first multiplier;

a second low-pass filter for removing high frequency components contained in an output of said second multiplier;

a subtractor for subtracting an output of said second low-pass filter from an output of said first low-pass filter; and

a low-pass filter for receiving an output of said subtractor and having a cut-off frequency of fc/2,

wherein fc is a carrier frequency of an interference AM modulation wave causing neighboring interference, fp1 > fp2, and fp1 - fc = fc - fp2.

3.   An AM neighboring interference removing circuit for removing AM neighboring interference of an AM receiver, comprising:

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a first local oscillator for generating an oscillation output having a frequency of $(fp1 + f\alpha)$;

a second local oscillator for generating an oscillation output having a frequency of $(fp2 - f\alpha)$;

5   a third local oscillator for generating an oscillation output having a frequency of $(fp2 + 3f\alpha)$;

a first multiplier for multiplying an AM stereo modulation wave desired to be received, by the oscillation output from said first local oscillator;

10   a second multiplier for multiplying the AM stereo modulation wave desired to be received, by the oscillation output from said second local oscillator;

a third multiplier for multiplying the AM stereo modulation wave desired to be received, by the oscillation output from said third local oscillator;

15   a first low-pass filter for removing high frequency components contained in an output of said first multiplier;

a second low-pass filter for removing high frequency components contained in an output of said second multiplier;

20   a third low-pass filter for removing high frequency components contained in an output of said third multiplier;

25   a subtractor for subtracting outputs of said second

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and third low-pass filters from an output of said first low-pass filter; and

a band-pass filter for receiving an output of said subtractor and having a band-pass frequency in a range from 5 $(fc/2 - fa)$ to $(fc/2 + fa)$,

wherein fc and $(fc + 2fa)$ are carrier frequencies of interference AM modulation waves causing neighboring interference, being lower and higher by a frequency fa from an AM carrier frequency of the AM stereo modulation wave 10 desired to be received, fp1 > fp2, and fp1 - fc = fc - fp2.